

Title (en)

TUBE FILLING MACHINE AND METHOD FOR SIMULTANEOUSLY FILLING DIFFERENT TYPES OF EMPTY TUBES

Title (de)

TUBENFÜLLMASCHINE UND VERFAHREN ZUM GLEICHZEITIGEN BEFÜLLEN VERSCHIEDENER TYPEN VON LEEREN TUBEN

Title (fr)

MACHINE DE REMPLISSAGE DE TUBES ET PROCÉDÉ DE REMPLISSAGE SIMULTANÉ DE DIFFÉRENTS TYPES DE TUBES VIDES

Publication

**EP 4065481 A4 20240207 (EN)**

Application

**EP 20893115 A 20201127**

Priority

- SE 1951363 A 20191128
- SE 2020051137 W 20201127

Abstract (en)

[origin: WO2021107854A1] A tube filling machine (1 ) adapted to fill different types of empty tubes (18) simultaneously, where the filling machine (1 ) comprises a grouping device (11), a transfer device (9), a conveyor (7) and a filling device (29 comprising a plurality of filling nozzles (3, 4, 5, 6), where the grouping device (11 ) comprises a first supply tray (13) with a first type of tubes, a second supply tray (14) with a second type of tubes, a receiving tray (17) and a pick-up head (12), where the transfer device (9) is adapted to transfer a grouped row of empty tubes (18) from the receiving tray (17) to the conveyor (7), where the grouping device 811) is adapted to place a plurality of groups (21 ) of empty tubes adjacent each other in the receiving tray (17), where a group (21 ) comprises a row of the first type of tubes and a row of the second type of tubes, that the transfer device (9) is adapted to transfer a row of grouped empty tubes from the receiving tray (17) to the conveyor (9), and where the filling nozzles (3, 4, 5, 6) are adapted to fill the grouped empty tubes with different content. The invention also concerns a method for simultaneously filling different types of empty tubes with a content.

IPC 8 full level

**B65B 5/06** (2006.01); **B65B 5/12** (2006.01); **B65B 43/54** (2006.01); **B65B 3/04** (2006.01); **B65B 7/28** (2006.01); **B65B 39/00** (2006.01)

CPC (source: EP US)

**B65B 3/04** (2013.01 - US); **B65B 5/068** (2013.01 - EP); **B65B 5/12** (2013.01 - EP); **B65B 39/06** (2013.01 - US); **B65B 43/54** (2013.01 - EP US); **B65B 3/04** (2013.01 - EP); **B65B 7/2821** (2013.01 - EP); **B65B 39/00** (2013.01 - EP); **B65B 2039/009** (2013.01 - EP US); **B65B 2220/16** (2013.01 - EP US)

Citation (search report)

- [Y] US 2018229866 A1 20180816 - EBERHARDT ALBERT [DE], et al
- [Y] DE 202005019906 U1 20070426 - AUTEFA AUTOMATION GMBH [DE]
- [A] KR 20120004357 U 20120619
- See also references of WO 2021107854A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2021107854 A1 20210603**; BR 112022010010 A2 20220816; CN 114945518 A 20220826; EP 4065481 A1 20221005; EP 4065481 A4 20240207; MX 2022006347 A 20220623; US 11878826 B2 20240123; US 2022411119 A1 20221229

DOCDB simple family (application)

**SE 2020051137 W 20201127**; BR 112022010010 A 20201127; CN 202080082170 A 20201127; EP 20893115 A 20201127; MX 2022006347 A 20201127; US 202017756628 A 20201127